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Citrobacter rodentium NleA DNA Sequence

ATGAACATTCAACCGAACATACATTCCGGAATCACCACACAGAATAATCAACAACATCATCACGCAGAA
CAAGTGCCTGTCTCTAGCTCAATACCGCGATCAGATTTACCTCCAAATTGCGAAGCTGGATTTGTTGTG
CATATTCCAGAGGATATACAGCAACATGTACCGGAATGTGGTGAAACAACGGCTCTATTAAGCTTGATA
AAAGATGAAGGCCTGCTCTCAGGACTAGATAAATATCTTGCTCCTCACCTTGAAGAAGGCTCCCTTGGG
AAAAAAGCATTGGATACGTTTGGTTTATTCAATGTTACTCAAATGGCATTAGAGATACCCAGTTCGGT
CCAGGCATATCTGGTAAATATGGTGTTTCAGATGAACATTGTAAAACCAGACATACATCCAACAACCGG
AACTATTTTTTACAGCTATTTCTCTGCATGACGAAATAGGTTTTAACTTCAAAGATCTTCCTGGCCCA
TTAAAAAATGCATTAACCAACAGCAGTATATCGGCTACTGCATCGACTGTAGCCCCACACCAAACGAC
CCAATGCCATGGTTTGGATTAACTGCTCAAGTGGTTCGTAATCATGGTGTAGAACTTCCTATAGTCAA
ACCGAAAATGGATGGAAGCTTGTAGGGGAAACACCTCTTACTCCAGATGGCCCCAAAGCCAATTATACG
GAAGAATGGGTTATCAGGCCGGGAGAAGCAGATTTTAAATATGGAACATCGCCATTACAGGCAACTCTT
GGACTGGAGTTTGGTGCGCATTTTAAAGTGGGATTTAGATAATCCTAATACCAAATATGCCATCCTTACC
AATGCTGCCGCAAATGCTATTGGTGCTGCTGGAGGGTTTGCGGTATCCAAAGTCCCCGGCATAGATCCA
ATGCTGTCCCCTCATGTCCGTGCAATGCTTGGGCAAGCAGCGGGGCATGCCGTACAATGTAATACCCCC
GGATTAAAGCCAGACACTATTTTATGGTGGGCAAGCGCGACATTTGGAGCTGCTGATTTAAATAAAGCC
GAATTTGATAAAGTGCAGTCACTGACTACCCTCGTATATGGTTCATGCACGGGAAGGAGCTTTATTC
CCAAATAAGCAAGACATTGCCCGTGTAAACAGGCGCAGACATAAAAGCTATGGAAGAAGGCGTACCCGTT
GGACATCAACATCCAAAACCGGAGGATGTGGTCATCGATATCGAAGGTGGCAATTCACCACATCATAAT
CCATCAAATTATGTTGACACCTTTGAAATAATCCAAGAAACAAGGGTCTAA (SEQ ID NO:1)

FIG. 1ACitrobacter rodentium NleA Protein Sequence

MNIQPNIHSGITTONNQHHHAEQVPVSSSIPRSDLPPNCEAGFVVHIPEDIQQHVPECGETTALLSLI
KDEGLLSGLDKYLAPHLEESLGKKALDTFGLFNVQMALEIPSSVPGISGKYGVQMNIVKPDHPTTG
NYFLQLFPLHDEIGFNFKDLPGPLKNALTNSSISATASTVAPTNDPMPWFGLTAQVVRNHGVELPIVK
TENGWKLVGETPLTPDGPKANYTEEWVIRPGEADFKYGTSPLOATLGLFEGAHFKWDLNPNNTKYAILT
NAAANAIGAAGGFAVSKVPGIDPMLS PHVGAMLGQAAGHAVQCNTPGLKPDITLWWAGATFGAADLNKA
EFDKVRFTDYPRIWFHAREGALFPNKQDIARVTGADIKAMEEGVPVGHQHPKPEDVVIDIEGGNSPHHN
PSNYVDTFEIIQETRV (SEQ ID NO:22)

FIG. 1B

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Enteropathogenic *E. coli* NleA DNA Sequence

atgaacattcaaccgatcgtaacatccggaatcaccacacaaaacaatcgacatcatcacgcagaacaa
acgtcccctacacaaataccgcaatccgaattacctaattggatgcgaaacgggatttggtgttcatatc
ccagaggatatgcagcgacatgcaccggaatgcggtgaaacaacagctctactgagcttgataaaagat
gaaggtctgctctctgggctggataaatatcttgcacctcatcttgaagaaggctctgcaggaaaaaaa
gcattggatatgtttggtttattcaatgtctctcagatggcattagaaataccagcaccgttccgggt
atctctggtaaatatggtgtccagctaaacattgtaaaaccagatattcatcctacatcaggtaattat
tttttacagatattccctttgcatgatgaaataggtattaatttttaaagaccttcctggtccattaaaa
aatgcattaagcaacagcaatataccaaccactgtatcgactgctgcatccactattgcatcagccact
acttcgacggtaaccaccgctcaaaagacccaataccatgggttggattaacagctcaagtagttcgt
aatcatgggtgtggaacttcctatagtcaaaaactgaaaatggatggaagcttggtggagaaactcctctt
actcctgatggcccaagcaaattatactgaagagtgggtgatcagaccgggagaagcagatttttaa
tatggtgcatctccactacaggcaactctagggctggagtttggcgacatttcaagtgggatttagat
aaccctaataactaaatatgccgttcttaccaatgctgccgcaaatacgcttggtgctgtagggggattt
gcagtatccagatttactggtacagatccaatgttaagtcctcatatcggtgcaatgggtgggcaagca
gcggggcatgccatacagtataatacccccgattaaagccagacactattttatggtgggcagggtact
actcttggactggctgatttaaacaaaggccgagtttggagaggccagattcactgactatcctcgtata
tggtggcatgcaagagaaggtgccattttcccaaataaagcagatattgaacatgccacaggggctgat
atacgcgcaatggaagaaggtgtatctgttggacaacggcatccaaatccagaggatgtggtcatcaat
atcgaaagcaataactcaccacatcataacccatcaaattatgttgataccggtgatataatccaagaa
acaagagtctaa (SEQ ID NO:2)

FIG. 1CEnteropathogenic *E. coli* NleA Protein Sequence

MNIQPIVTSGITTONNRHHAEQTSPTQIPQSELPNGCETGFVVHIPEDMQRHAPECGETTALLSLIKD
EGLLSGLDKYLAPHLEEGSAGKKALDMFGLFNVSQMALEIPSTVPGISGKYGVQLNIVKPDHPTSGNY
FLQIFPLHDEIGINFKDLPGPLKNALSNSNIPTTVSTAASIASATTSTVTTASKDPIPWFGTLTAQVVR
NHGVELPIVKTENGWKLVGETPLTPDGPKANYTEEWVIRPGEADFKYGASPLQATLGLEFGAHFKWDL
NPNTKYAVLTNAAANALGAVGGFAVSRFTGDPMLSPHIGAMVQAAGHAIQYNTPLKPDITLWWAGT
TLGLADLNKAEFGEARFTDYPRIWWHAREGAIFPNKADIEHATGADIRAMEEGVSVGQRHPNPEDVVIN
IESNNSPHHNPSNYVDTVDIQETRV (SEQ ID NO:23)

FIG. 1D

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Enterohemorrhagic *E. coli* NleA DNA Sequence

ATGAACATTCAACCGACCATAACAATCTGGAATCACCTCACAAAACAATCAACATCATCAAACAGAACAA
ATACCCTCTACACAAATACCGCAATCCGAATTACCTCTAGGATGCCAAGCTGGATTTGTTGTTAATATT
CCAGATGATATACAGCAACATGCACCGGAATGCGGTGAAACAACAGCTCTACTGAGCTTGATAAAAGAT
AAAGGTCTGCTCTCAGGGCTAGACGAATATATAGCTCCTCACCTTGAAGAAGGATCCATAGGAAAAAAA
ACATTGGATATGTTTGGTTTATTCAATGTTACCCAAATGGCATTAGAGATACCTAGTTCCGTTTCAGGC
ATCTCTGGTAAATATGGTGTCCAGCTAAACATTGTAAAACAGATATTCATCCTACATCAGGTAATTAT
TTTTTACAGATATTCCCTCTGCATGATGAAATAGGTTTAAATTTTAAAGACCTTCCTGGCCCGTTAAAA
AATGCATTAAGCAACAGTAATATATCAACCACTGCAGTGTCGACTATTGCATCGACTGGAACATCAGCC
ACTACTTCGACGGTAACCAACCGAGCCAAAAGACCCAATACCATGGTTTGGATTAACAGCTCAAGTGGTT
CGTAATCATGGTGTAGAACTTCCTATAGTCAAACTGAAAATGGATGGAAGCTTGTTGGAGAAACACCA
CTTACTCCTGATGGGCCGAAAGCAAATTACACGGAGGAGTGGGTTATCAGACCGGGAGAAGCAGATTTT
AAATATGGTGCATCTCCATTACAGGCAACTCTAGGGCTGGAGTTTGGCGCACATTTCAAGTGGGATTTA
GATAACCCCTAATACTAAATATGCCGTTCTTACCAATGCTGCCGCAAATGCGCTTGGTGCTTTAGGGGGA
TTTGCAGTATCCAGATTGCTAGTACAGATCCAATGTTAAGTCCTCATATCGGTGCAATGGTTGGGCAA
GCAGCAGGGCATGCCATACAGTATAATACCCCTGGATTAAAGCCAGACACTATTTTATGGTGGGCTGGT
GCGACACTGGGGGCTGCCGATTTAAACAAGGCCGAGTTTGAAGTAGCTAGATTCACAGCTATCCTCGT
ATATGGTGGCAGCAAGAGAAGGAGCTATTTTCCCAATAAAGCAGATATTGAACATGCCACAGGTGCT
GATATACGCGCAATGGAAGAAGGTATCCCTGTTGGACAGCGGCATCCAAATCCAGAGGATGTGGTAATC
GATATCGAAAGCAATGGCTTACCACATCATAATCCATCAAATCATGTTGATATCTTTGATATAATCCAA
GAAACAAGAGTCTAA (SEQ ID NO:3)

FIG. 1EEnterohemorrhagic *E. coli* NleA Protein Sequence

mnigptiqsgitsqnnqhhteqipstqipqselpglgcqagfvvniipddiqqhapedcgetallslid
kgllsgldeyiaphleegsigkktldmfglfnvtqmaleipssvsgisgkygvqlnivkpdihptsgny
flqifplhdeigfnfkdlpgplknalsnsnisttavstiasstgtsattstvttepkdpipwfgltavv
rnhgvelpivktengwklvgetpltpdgpkanyteewvirpgeadfkylgasplqatlglefghfkwdl
dnpntkyavltnaaanalgalgfavrsfastdpmlsphigamvgqaaghaiqyntpglkpdtillwag
atlgaadlnkaefevartdydpriwwharegaifpnkadiehatgadirameegipvgqrhpnpedvvi
diesnglphhnpshvdifdiiqetr (SEQ ID NO:24)

FIG. 1F

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Citrobacter rodentium NleB DNA Sequences

tattcttttttcagtggtttgaagcAAGGCCAGAGCGATACGGAAAAGGTGAAGTACCGATATTGAATAC
CAAAGAGCATCCGTATTTGAGCAATATTATAAATGCTGCAAAAATAGAAAATGAGCGcgTAATaGGAGT
ACTGGTAGACGGAGACTTTACTTATGAGCAAAGAAAAGAATTTCTCAGTCTTGAAGATGAACATCAAAA
TATAAAGATAATATATCGGGAAAATGTTGATTTTCAGTATGTATGATAAAAACTGTCTGATATTTATCT
TGAAAATATTCATGAACAAGAATCATATCCAGCGAGTGAGAGAGATAATTATCTGTTaGGcTTaTTAAG
AGAAGAGTTAAAAAATATTCCATACGGAAAGGACTCTTTGATTGAATCATATGCAGAAAAAAGAGGTCA
TACTTGGTTTGATTTTTTTTAGAAACTTGCGGTATTGAAGGGGGGGGGTTGTTTACAGAGACGGGTAA
AACTGGATGCCATAACATATCTCCATGTGGGGGATGTATATATCTTGATGCAGATATGATTATTACTGA
TAAATTAGGTGTCCTGTATGCTCCTGATGGTATcgctgtgcatgtagattgtaatgatgaga (SEQ
ID NO:4)

FIG. 2A

AAGGCCAGAGCGATACGGAAAAGGTGAAGTACCGATATTGAATACCAAAGAGCATCCGTATTTGAGCAA
TATTATAAATGCTGCAAAAATAGAAAATGAGCGTAATGGAGTACTGGTAGACGGAGACTTTACTTATGA
GCAAAGAAAAGAATTTCTCAGTCTTGAAGATGAACATCAAAATATAAAGATAATATATCGGGAAAATAT
TGATTTTCAGTATGTATGATAAAAACTGTCTGATATTTATCTTGAAAATATTCATGAACAAGAATCATA
TCCAGCGAGTGAGAGAGATAATTATCTGTTGGTTTTAAGAGAAGAGTTAAAAAATATTCCATACGGAAA
GGACTCTTTGATTGAATCATATGCAGAAAAAAGAGGTCATACTTGGTTTGATTTTTTTAGAACTTGGC
GGTATTGAAGGGGGGGGGTTGTTTACAGAGACGGGTAAACTGGATGCCATAACATATCTCCATGTGG
GGGATGTATATATCTTGATGCAGATATGATTATTACTGATAAATTAGGTGTCCTGTATGCTCCTGATGG
TAT (SEQ ID NO:5)

FIG. 2BCitrobacter rodentium NleB Protein Sequences

ILFQWFEARPERYGKGEVPILNTKEHPYLSNIINA AKIENERVIGVLVDGDFTYEQRKEFLSLEDEHQN
IKIIYRENVDFSMYDKKLSDIYLENIHEQESYPASERDNYLLGLLREELKNIPYGKDSLIESYAEKRGH
TWFDFFRNLA VLKGGGLFTETGKTGCHNISPCGGCIYLDADMIITDKLGVLYAPDGI AVHVDCNDE
(SEQ ID NO:25)

FIG. 2C

RPERYGKGEVPILNTKEHPYLSNIINA AKIENERVIGVLVDGDFTYEQRKEFLSLEDEHQNIKIIYREN
VDFSMYDKKLSDIYLENIHEQESYPASERDNYLLGLLREELKNIPYGKDSLIESYAEKRGH TWFDFFRN
LA VLKGGGLFTETGKTGCHNISPCGGCIYLDADMIITDKLGVLYAPDG (SEQ ID NO:26)

FIG. 2D

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Enteropathogenic *E. coli* NleB DNA Sequence

atgttatcttcattaaatgtccttcaatccagcttcagaggaaagacagctttatcaaatagtacactt
 ctccagaaagtttcttttgcctggaaaagaatattctctggaacctattgatgaaagaacccctattctt
 ttccagtgggttgaagcaaggccagagcgatacgaataaggagaagtaccaatattgaataccaaagaa
 catccgtatttgagcaatattataaatgctgcaaaaaatagaaaatgagcgtataatcgggtgtgctggta
 gatggaaattttacttatgaacaaaaaaaggaatttctcaatcttgaaaatgaacatcaaaatataaaa
 ataactctaccgagcagatgtggatttcagcatgtatgataaaaaactatctgatattttaccttgaaaat
 atccataaacaagaatcataccctgccagtgcaggggataattatctgttaggcttattaagagaagag
 ttaaaaaatatcccagaaggtaaggactctttgattgagtcatatgcagaaaaagagaacatacttgg
 tttgattttttcaggaatttggccatattgaaggctggaagtttgtttacagagacgggaaaaactgga
 tgccataacatatcgccctgtagcggatgtatatatcttgatgccgacatgattattaccgataaatta
 ggagtcctgtatgctcctgatggatcgctgtgcatgtagattgtaatgatgagataaaaagtcttgaa
 aatgggtgcgatagttgtcaatcgtagtaatcatccagcattacttgcaggcctcgatattatgaagagt
 aaagttgacgctcatccatattatgatggcttaggaaagggtatcaagcggcatttttaactattcatcg
 ttacacaattataatgctttttgtgattttattgaatttaagcatgaaaatattataccgaataccagt
 atgtataccagcagttcatggtaa (SEQ ID NO:6)

FIG. 2EEnteropathogenic *E. coli* NleB Protein Sequence

MLSSLNVLQSSFRGKTALSNSTLLQKVSFAGKEYSLEPIDERTPILFQWFEARPERYKGEVPILNTKE
 HPYLSNIINAAKIENERIIGVLVDGNFTYEQKKEFLNLENEHQNIKIIYRADVDFSMYDKKLSDIYLEN
 IHKQESYPASERDNYLLGLLREELKNIPEGKDSLIESYAEKREHTWFDFFRNLAAILKAGSLFTETGKTG
 CHNISPCSGCIYLDADMIITDKLGVLYAPDGIAPHVDCNDEIKSLENGAIVVNRSNHPALLAGLDIMKS
 KVDAHPPYDGLGKGIKRHFNYSSLHNYNAFCDFIEFKHENIIPNTSMYTSSSW (SEQ ID NO:27)

FIG. 2FEnterohemorrhagic *E. coli* NleB DNA Sequence

ATGTTATCTTCATTAAATGTCCTTCAATCCAGCTTCAGAGGAAAGACAGCTTTATCAAATAGTACACTT
 CTCCAGAAAGTTTCTTTTGCCTGGAAAAGAATATCCTCTGGAACCTATTGATGAAAAAACCCCTATTCTT
 TTTCAGTGGTTTGAAGCAAGGCCAGAGCGATACGAAAAAGGAGAAGTACCAATATTGAATACCAAAGAA
 CATCCGTATTTGAGCAATATTATAAATGCTGCAAAAATAGAAAATGAGCGTATAATCGGTGTGCTGGTA
 GATGGAAATTTTACTTATGAACAAAAAAGGAATTTCTCAGTCTTGAAAATGAATATCAAAATATAAAA
 ATAATCTACCGAGCAGATGTGGATTTTCAGCATGTATGATAAAAACTATCTGATATTTACCTTGAAAAT
 ATCCATAAACAAGAATCATACCCTGCCAGTGAGAGGGATAATTATCTGTAGGCTTATTAAGAGAAGAG
 TAAAAAATATCCAGAAGGTAAGGACTCTTTGATTGAGTCATATGCAGAAAAAAGAGAACATACTTGG
 TTTGATTTTTTTCAGGAATTTGGCCATGTTGAAGGCTGGAAGTTTGTGTTACAGAGACGGGAAAACTGGA
 TGCCATAACATATCGCCCTGTAGCGGATGTATATATCTTGATGCCGACATGATTATTACCGATAAATTA
 GGAGTCTGTATGCTCCTGATGGTATCGCTGTGCATGTAGATTGTAATGATGAGATAAAAAGTCTTGAA
 AATGGTGCGATAGTTGTCAATCGTAGTAATCATCCAGCATTACTTGCAGGCCTCGATATTATGAAGAGT
 AAAGTTGACGCTCATCCATATTATGATGGTCTAGGAAAGGGTATCAAGCGGCATTTTAATCTATTCATCG
 TTACACGATTATAATGCTTTTTGTGATTTTATTGAATTTAAGCATGAAAATATTATACCGAATACCAGT
 ATGTATACCTGCAGTTCATGGTAA (SEQ ID NO:7)

FIG. 2G

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Enterohemorrhagic *E. coli* NleB Protein Sequences

mlssl nvlqssfrgktalsnstllqkvsfagkeyplepidetktpilfqwfearperyekgevpilntke
 hpylsniinaakieneriigvldgnftyeqkkeflsleneyqnikiiyradvdfsmydkklsdiyen
 ihkqesypaserdnyllgllreelknipegkdsliesyakrehtwdfdfnrlamlkagslftetgktg
 chnispcsgciyldadmiitdklgvlyapdgiavhdcndeikslengaivvnrsnhpallagldimks
 kvdahpyydgldgkigkrhfnyslhdyna fcdiefkheniipntsm ytcsw (SEQ ID NO:28)

FIG. 2H

MLSPIRTTFHNSVNIVQSSPCQTVSFAGKEYELKVIDEKTPIILFQWFEPNPERYKKDEVPIVNTKQHPY
 LDNVTNAARIESDRMIGIFVDGDFS VNQKTAFSKLERDFENVMIYREDVDFS MYDRKLSDIYHDIICE
 QRLRTEDKRDEYLLNLLLEKELREISK AQDSLISMYAKKRNHAWFDFFRNLALLKAGEIFRCTYNTKNHG
 ISFGE GCIYLDMDMILT GKLGTIYAPDGISMHVDRRND SVNIENSAIIVNRSNHPALLEGLSFMH SKVD
 AHPYYDGLGKGVKKYFNFTPLHNYNHFCDFIEFNHPNIIMNTSQYTCSSW (SEQ ID NO:29)

FIG. 2IEnterohemorrhagic *E. coli* NleB DNA Sequence

atgctttcac	cgataaggac	aactttccat	aactcagtaa	atatagtga	gagttcaccc
tgtcaaacgg	tttcttttgc	aggaaaggaa	tatgagttaa	aggtcattga	tgaaaaaacg
cctattcttt	ttcagtggtt	tgaacctaat	cctgaacgat	ataagaaaga	tgagggtcca
atagttaata	ctaagcagca	tccctattta	gataatgtca	caaatgcggc	aaggatagag
agtgatcgta	tgataggtat	ttttgttgat	ggcgattttt	cagtcaacca	aaagactgct
ttttcaaaat	tggaacgaga	ttttgaaaat	gtaatgataa	tctatcgga	agatgttgac
ttcagtatgt	atgacagaaa	actatcagat	at ttatcatg	atattatatg	tgaacaaagg
ttacgaactg	aagacaaaag	agatgaatac	ttgttgaatc	tgtagagaa	agagctgagg
gaaatttcaa	aggcgagga	ttctttgatt	tctatgtatg	caaagaaaag	aatcatgca
tggtttgatt	tcttcagaaa	tttagcctta	ttaaaagcag	gagagatatt	caggtgcaca
tataatacaa	agaatcacgg	tatttcattc	ggggaggggt	gtatctatct	tgatattgat
atgatactta	caggtaaagt	tggtacaata	tatgctcctg	atggaatttc	aatgcatgtg
gatcgtcgta	atgatagtgt	aaatattgaa	aatagtgcaa	taattgttaa	ccgtagtaat
catcctgctc	tacttgaggg	actttctttt	atgcatagta	aagtagatgc	tcatccatat
tatgatgggt	tggggaaagg	agttaagaaa	tattttaatt	ttacaccatt	acataattat
aatcattttt	gtgactttat	tgagtttaac	caccctaata	taatcatgaa	cacaagtcag
tatacatgca	gttcatggtg	a	(SEQ ID NO:60)		

FIG. 2J

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Citrobacter rodentium NleC DNA Sequence

ATGAAAATTCCCTCACTCCAGCCCAGCTTCAACTTTTTTCGCCCCAGCAGGATACTCTGCTGCCGTTGCT
CCCAATCGTTCCGGACAATGCCTATGCTGATTACGTATTGGATATAGGCAAGCGAATACCACTTTCCGCG
GAAGATTTAGGCAACCTATATGAAAATGTCATTTCGCGCCGTTTCGTGACAGCCGTAGCAAGCTCATAGAT
CAGCATACGGTCGATATGATTGGTAACACTATACTTGATGCTTTTGAGCCGATCACAAACCTTTTCGTGAT
GCCGTAAGCTATGGCATTCAATAAAGGAGGTACACATTGGTTGCATTAAATACAGAAACGAATACGAG
CTCAACGGAGAATCCCCCGTCAAAGTTGATGATATTCAATCACTAACCTGTACCGAATTATATGAATAC
GATGTCGGGGCAAGAACCAATTTTACCCATTTGCGAGGCAGGAGAAAACGATAACGAAGAGCCTTATGTC
AGTTTTAGTGTTGCGCCAGATACTGACTCTTATGAGATGCCATCGTGCGAGGAAGGGCTGATTCACGAG
ATTATTCATCATGTGACTGGAGCTAGCGATCCGTCTGGAGATAGTAATATAGAGCTAGGACCCACGGAG
ATTCTCGCACGTCGTGTCGCTCAAGAGCTGGGATGGACTGTCCCGACTTCATAGGATATGCAGAGCCA
GATCGTGAAGCTCATCTTAGGGGACGTAACCTGAATGCCCTTCGACAGGCGGCCATGCGACATGAAGAT
AATGAGAGGACTTTCTTCGAAAGGCTGGGTATGATCAGTGATCGATATGAGGCGAGTCCGTGATTTTACA
GAGTATTCGCTGTGTCTAACATAGAATATGGATTTATCCAGCAACATGATTTTCCCGGGTTGGCTATC
GACGATAATTTACAGGATGCAAATCAGATCCAACCTCTATCATGGAGCACCTTATATCTTTACATTCGGG
GATGTGGACAAACACAATCAGCGCTGA (SEQ ID NO:8)

FIG. 3ACitrobacter rodentium NleC Protein Sequence

MKIPSLQPSFNFFAPAGYSAAVAPNRS DNAYADYVLDIGKRIPLSAEDLG NLYENVIRAVRDSRSKLID
QHTVDMIGNTILDALSR SQTFRDAVS YGIHNKEVHIGCIKYRNEYELNGESPVKVDDIQSLTCTELYEY
DVGQEPILPICEAGENDNEEPYVSFSVAPD TDSYEMPSWQEGLIHEIIHHVTGASDPSGDSNIELGPTE
ILARRVAQELGWTVPDFIGYAEPDREAH LRGRNLNALRQAAMRHEDNERTFFERLGMISDRYEASPDFT
EYSAVSNIEYGFIQQHDFPGLAIDDNLQDANQIQLYHGAPYIFTFGDVKHNQR (SEQ ID NO:30)

FIG. 3B

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Enteropathogenic *E. coli* NleC DNA Sequence

atgaaaattccctcattacagtcctcaacttcaacttttccgccccggcaggatactctgctcccattgct
cctaatacgtgctgaaaatgcctatgctgattacgttttggatataggttaagcgaataccactttccgca
gcagatttaagcaacgtatacgaagtgtaatacgcgccgtccatgacagccgtagcaggcttatcgat
cagcatacagtcgatatgatcggcaacactgtacttgatgctttgagccgatcacagacatttcgtgat
gccgtaagctatggcattcataatgagaagggtacacattgggttgattaaatacagaaacgaatacagag
cttaacgaagaatcttctgtcaaaattgatgatattcaatcactaacctgtaacgaattatatgaatat
gatgtcgggcaagagccaattttccccatttgcgaagcaggagaaaacgataacgaagagccttatgtc
agtttttagtggttgcgccagatactgactcttatgagatgccatcgtggcaggaaggactgattcacgag
attattcatcatgttactggatctagcgatccatctggagatagtaatatagagttaggacccaccgag
attctcgcacgtcgtgtcgtcaagaactgggatggagtgttcccgacttcaaaggatatgcagagcca
gaacgtgaagctcatcttaggttacgtaacctgaatgcccttcgacaggctgccatgaggcatgaagag
aatgagaggggctttcttcgaaaggctgggtacgatcagtgaccgatatgaggcgagtcctgatttcaca
gagtattccgctgtgtcctaacaataggatacggatttatccagcaacatgattttcctggattggctatc
aacgataatttacaggatgcaaatacagatccaactgtatcatggcgccccttatatttttacatttggg
gatgtggacaaacacaatcagcgatga (SEQ ID NO:9)

FIG. 3CEnteropathogenic *E. coli* NleC Protein Sequence

MKIPSLQSNFNFAPAGYSAPIAPNRAENAYADYVLDIGKRIPLSAADLSNVYESVIRAVHDSRSRLID
QHTVDMIGNTVLDALSRSTFRDAVSYGIIHNEKVHIGCIKYRNEYELNEESSVKIDDIQSLTCNELYEX
DVGQEPFIFFICEAGENDNEEPYVSFSVAPDTSYEMPSWQEGLIHEIIHHVTGSSDPSGDSNIELGPTE
ILARRVAQELGWSVPDFKGYAEPEREAHLRLRLNALRQAAMRHEENERAFFERLGTISDRYEASPDFT
EYSAVSNIGYGFIQQHDFPLAINDNLQDANQIQLYHGAPYIFTFGDVKHNQR (SEQ ID NO:31)

FIG. 3D

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Enterohemorrhagic *E. coli* NleC DNA Sequence

ATGAAAATTCCCTCATTACAGTCCAACCTTCAACTTTTCCGCCCCGGCAGGATACTCTGCTCCCATTGCT
CCTAATCGTGCTGAAAATGCCTATGCGGATTACGTTTTGGATATAGGTAAGCGAATACCACTTTCCGCA
GCAGATTTAAGCAACGTATACGAAAGTGTAATACGCGCCGTCCATGACAGCCGTAGCAGGCTTATCGAT
CAGCATAACAGTCGATATGATCGGCAACACTGTACTTGATGCTTTGAGCCGATCACAGACATTTTCGTGAT
GCCGTAAGCTATGGCATTTCATAATGAGAAGGTACACATTGGTTGCATTAAATACAGAAACGAATACGAG
CTTAACGAAGAATCTTCTGTCAAATTTGATGATATTCAATCACTAACCTGTAACGAATTATATGAATAT
GATGTCGGGCAAGAGCCAATTTTCCCCATTTGCGAAGCAGGAGAAAACGATAACGAAGAGCCTTATGTC
AGTTTTAGTGTTGCGCCAGATACTGACTCTTATGAGATGCCATCGTGGCAGGAAGGACTGATTCACGAG
ATTATTCATCATGTTACTGGATCTAGCGATCCATCTGGAGATAGTAATATAGAGTTAGGACCCACCGAG
ATTCTCGCACGTCGTGTCGCTCAAGAACTGGGATGGAGTGTTCCTCGACTTCAAAGGATATGCAGAGCCA
GAACGTGAAGCTCATCTTAGGCTACGTAACCTGAATGCCCTTCGACAGGCTGCCATGAGGCATGAAGAG
AATGAGAGGGCTTTCTTCGAAAGGCTGGGTACGATCAGTGACCGATATGAGGCGAGTCCTGATTTTACA
GAGTATTTCCGCTGTGTCTAACATAGGATACGGATTTATCCAGCAACATGATTTTCTGGATTGGCTATC
AACGATAATTTACAGGATGCAAATCAGATCCAACCTGTATCATGGCGCCCCTTATATTTTTACATTGGG
GATGTGGACAAACACAATCAGCAATGA (SEQ ID NO:10)

FIG. 3EEnterohemorrhagic *E. coli* NleC Protein Sequence

mkipslqsnfnfsapagysapiapnraenayadyvldigkriplsaaadlsnvyesviravhdsrsrlid
qhtvdmigntvldalsrsqtfrdavsygihnekvhigcikyrneyelneessvkiddiqsltcnelyey
dvgqepifpiceagendneepyvsfsvapdttsyempswqegliheiihhvtgssdpsgdsnielgpte
ilarrvaqelgwsvpdfkgyaepereahlrlrlnlnalrqaamrheenerafferlgtisdryeaspdf
eysavsnigygfiqqhdfpplaindnlqdanqilqlyhgapyiftfgdvdkhnqq (SEQ ID NO:32)

FIG. 3F

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Citrobacter rodentium NleD DNA Sequence

ATGCGCCCTACATCCCTTAACCTGACATTACCTTCGTTACCTCTACCCTCATCTTCAAATTCAATTTCA
GCCACAGACATTCAATCTCTTGTAAAAATGTCGGGTGTGCGCTGGGTGAAAAACAACCAACAACCTCTGT
TTCCACGGGACTGACCTTAAAATCTACCAGCATCTTGAAGCTGCCCTCGATAAGATCGAATCCACAGAC
ACTGGACGTACTCTTTTGAAGTGTATTGAATTAACATCCCGACTCAAATCAGAAAAAAGTGGCAATACAT
CTCGATTCTGCTGAGTTAGGGGTGATAGCACACTGCAATGCGGATGCTGAAAACTCCCGAGGAAGTGGC
TCCGACTTTCACTGTAATCTGAATGCAGTTGAATATCCCTGCGGGCAAGGAATTAGCCTGGTAGACTTT
CATGCATGCATTGTTTTCCATGAACTTCTCCACGTTTTCCACAATTTAAATGGAGAGCGCCTGAAAGTT
GAGAGTTCTCAACCAGAATTACAAACACACTCCCCACTTTTACTCGAAGAAGCCAGGACTGTTGGGTTG
GGTGCTTTTTTCTGAAGAAGTTCTTTCAGAAAATAAATTTTCGTGAAGAGATTGGGATGCCCCGCAGAACA
TTCTACCCGCACGATTCATCTCTCATTATGATGACAATACAGTGACTCAGAGATTCCAGCGGAAAAAA
CTGCATCCGTTACTTTAG (SEQ ID NO:11)

FIG. 4ACitrobacter rodentium NleD Protein Sequence

MRPTSLNLTLPSPSPSSNSISATDIQSLVKMSGVRWVKNNQQLCFHGTDLKIYQHLEAALDKIESTD
TGRLLNCIELTSRLKSEKLAIHLDSAELGVIAHCNADAENSRGTGSDFHCNLNAVEYPCGQGISLVDF
HACIVFHELLHVFNHLNGERLKVESQPELQTHSPLLLEEARTVGLGAFSEEVLSENKFREEIGMPRRT
FYPHDSSLIHDDNTVTQRFQRKKLHPLL (SEQ ID NO:33)

FIG. 4BEnteropathogenic E. coli NleD DNA Sequence

atgcgccctacgtccctcaacttgggtattacatcagtcacacgtcgagctcaatgtcagatacagat
atcgagtcctcttgtaaaagcatcgagcggttcaatggataaaaaataatccgcaacttcggttccagggg
actgatcataatatatatcagcagattgaagcagcactcgataagattgggtctacagagacagggcggt
gtactcctgaatgctattgaatcaatatcccgacttaaatcagaaacagtggttaatacacctcaactct
tccgactaggagttatggcacatagagatatagatgctgagaaccatcggggggactggttccgatttt
cactgtaatctgaatgcagttgaatatccctgtggggaggggattagcggtggtggactttcatgcgact
attgtttttcatgagttgctccatgttttccacaatttaaatggggagcggttgaaagttagagattcc
cgaccagaatcacaaaaatactctccacttttactcgaagaagccaggactgttgggttgggggctttt
tcagaggaggtgctttcagaaaaataattccgcgaagagattgggatgccccgtagaacctcctacccg
cacgactcagctcttattcatgatgacaatacagtgagtcgtgggattccaacaggtaagactgcatcca
ttgcttttag (SEQ ID NO:12)

FIG. 4C

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Enteropathogenic *E. coli* NleD Protein Sequence

MRPTSLNLVLHQSSSTSSMSDIEDIESLVKASSVQWIKNNPQLRFQGTDHNIYQQIEAALDKIGSTETGR
VLLNAIESISRLKSETVVIHLNSSRLGVMHRDIDAENHRGTGSDFHCNLNAVEYPCGEGISVVDHFAT
IVFHELLHVFHNLNGERLKVESSRPESQKYSPLLLLEEARTVGLGAFSEEVLSENKFREEIGMPRRTSYP
HDSALIHDDNTVSLGFQQVRLHPLL (SEQ ID NO:34)

FIG. 4DEnterohemorrhagic *E. coli* NleD DNA Sequence

ATGCGCCCTACGTCCCTCAACTTGGTATTACATCAGTCATCAAGGTCGAGCTCAATGTCAGATACAGAT
ATCGAGTCTCTTGTAAGCATCGAGCGTTCAATGGATAAAAAATAATCCGCAACTTCGTTTCCAGGGG
ACTGATCATAATATATATCAGCAGATTGAAGCAGCACTCGATAAGATTGGCTCTACAGAGACAGGGCGT
GTACTCCTGAATGCTATTGAATCAATATCCCGACTTAAATCAGAAACAGTGGTAATACACCTCAACTCT
TCCAGACTAGGAGTTATGGCACATAGAGATATAGATGCTGAGAACCATCGGGGGACTGGTTCGGATTTT
CACTGTAATCTGAATGCAGTTGAATATCCCTGTGGGGAGGGGATTAGCGTGGTGGACTTTCATGCGACT
ATTGTTTTTCATGAGTTGCTCCATGTTTTCCACAATTTAAATGGGGAGCGTTTGAAAGTTGAGAGTTCC
CGAGCAGAAATCACAAAATACTCTCCACTTTTACTCGAAGAAGCCAGGACTGTTGGGTTGGGGGCTTTT
TCAGAGGAGGTGCTTTTCAGAAAATAAATTCCACGAAGAGATTGGGATGCCCCGTAGAACCTCTACCCG
CRGACTCAGCTCTTATTCATGATGACAATACAGTGAGTCTGGGATTCCAACAGGTAAGACTGCATCCA
TTGCTTTAG (SEQ ID NO:13)

FIG. 4EEnterohemorrhagic *E. coli* NleD Protein Sequence

mrptslnlvlhqsssrssmsdiedieslvkassvqwiknnpqlrfqgtdhniyqqieaaldkigstetgr
vllnaiesisrlksetvvihlNSSRLGVMHRDIDAENHRGTGSDFHCNLNAVEYPCGEGISVVDHFAT
ivfHELLHVFHNLNGERLKVESSRAESQKYSPLLLLEEARTVGLGAFSEEVLSENKFHEEIGMPRRTSYP
xdsalihddntvslgfqqvrlhpll (SEQ ID NO:35)

FIG. 4F

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Citrobacter rodentium NleE DNA Sequences

tactttaatgaatcaccCAATGTATATGATAAGAAGTATATATCTGGCGTAACTAGAGGAGTAGCTGAA
CTAAAACAGGAAGGATTTATTAACGAGAAAGCCAGGCGACTTGCTTATATGCAAGCAATGTATTCTGTA
TGTCGGGAAGAGTTTAAACCTATTTCCAGAAACGAAGCTAGTACACCGGAAGGCAGCTGGCTAACAGTT
ATATCCGGAAAACGCCCAATGGGACAGTTTTCTGTAGATAGCTTATATCATCCTGACTTACATGCATTG
TGTGAGCTTCCGGATATTTGTTGCAAGATCTTCCCTAAAGAAAACAATGATTTTTTGTATATAGTGATT
GTGTACAGAAATGACAGCCCTCTGGGAGAACACGAGCAAATCGATTTATAGAATTATATAATATAAAA
AGAGACATCATGCAGGAATTAAATTATGAATCTCCAGAGTTAAAGGCTGTGAAATCTGAAATGATTATT
gcacgtgaaatgggagaaatctt (SEQ ID NO:14)

FIG. 5A

CAATGTATATGATAAGAAGTATATATCTGGCGTAACTAGAGGAGTAGCTGAACTAAAACAGGAAGGATT
TATTAACGAGAAAGCCAGGCGACTTGCTTATATGCAAGCAATGTATTCTGTATGTCCGGAAGAGTTTAA
ACCTATTTCCAGAAACGAAGCTAGTACACCGGAAGGCAGCTGGCTAACAGTTATATCCGGAAAACGCC
AATGGGACAGTTTTCTGTAGATAGCTTATATCATCCTGACTTACATGCATTGTGTGAGCTTCCGGATAT
TTGTTGCAAGATCTTCCCTAAAGAAAACAATGATTTTTTGTATATAGTGATTGTGTACAGAAATGACAG
CCCTCTGGGAGAACACGAGCAAATCGATTTATAGAATTATATAATATAAAAAGAGACATCATGCAGGA
ATTAAATTATGAATCTCCAGAGTTAAAGGCTGTGAAATCTGAAATGATTATT (SEQ ID NO:15)

FIG. 5BCitrobacter rodentium NleE Protein Sequences

YFNESPNVYDKKYISGVTRGVAELKQEGFINEKARRLAYMQAMYSVCPEEFKPISRNEASTPEGSWLTV
ISGKRPMGQFSVDSLYHPDLHALCELPDICCKIFPKENNDFLYIVIVYRNDSPLEQRANRFIELYNIK
RDIMQELNYESPELKAVKSEMI IAREMGEI (SEQ ID NO:36)

FIG. 5C

NVYDKKYISGVTRGVAELKQEGFINEKARRLAYMQAMYSVCPEEFKPISRNEASTPEGSWLTVISGKRP
MGQFSVDSLYHPDLHALCELPDICCKIFPKENNDFLYIVIVYRNDSPLEQRANRFIELYNIKRDIMQE
LNYESPELKAVKSEMI (SEQ ID NO:37)

FIG. 5D

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Enteropathogenic *E. coli* NleE DNA Sequence

atgattaatcctgttactaatactcagggcgtgtcccctataaataactaaatgatgctgaacatgtggtg
aaaaatatattacccgaaaattaaacatgattactttaatgaatcacccaatatatatgataagaagtat
atatccggtataaccagaggagtagctgaactaaaacaggaagaatttggttaacgagaaagccagacgg
ttttcttatatgaagactatgtattctgtatgtccagaagcgtttgaacctatttccagaaatgaagcc
agtacaccggaaggaagctggctaacagttatatccggaaaacgccaatggggcagttttctgtagat
agttttatacaatcctgattttacatgcattatgtgagcttccggacatttggtgtaagatcttccctaaa
gaaaataatgattttttatacatagttgttgtgtacagaaatgacagccctctaggagaacaacgggca
aatagatttatagaattatataatataaaaagagatatcatgcaggaattaaattatgagttaccagag
ttaaaggcagtaaaatctgaaatgattatcgcaogtgaaatgggagaaatcttttagctacatgcctggg
gaaatagacagtttatatgaaatacataaataataaactttctaaaattgagtag (SEQ ID NO:16)

FIG. 5EEnteropathogenic *E. coli* NleE Protein Sequence

MINPVTNTQGVSPINTKYAEHVVKNIYPKIKHDYFNESPNYDKKYISGITRGVAELKQEEFVNEKARR
FSYMKTMYSVCPEAFEPISRNEASTPEGSWLTVISGKRPMGQFSVDSLNPDLHALCELPDICCKIFPK
ENNDFLYIVVVYRNDSPLEGEQRANRFIELYNIKRDIMQELNYELPELKAVKSEMIAREMGEIFSYPG
EIDSYMKYINNKLKSKIE (SEQ ID NO:38)

FIG. 5F

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Enterohemorrhagic *E. coli* NleE DNA Sequence

ATGATTAATCCTGTTACTAATACTCAGGGCGTGTCCCCTATAAATACTAAATATGCTGAACATGTGGTG
AAAAATATTTACCCGGAAATTAAACATGATTACTTTAATGAATCACCCAATATATATGATAAGAAGTAT
ATATCCGGTATAACCAGAGGAGTAGCTGAACATAAACAGGAAGAATTTGTTAACGAGAAAGCCAGACGG
TTTTCTTATATGAAGACTATGTATTCTGTATGTCCAGAAGCGTTTGAACCTATTTCCAGAAATGAAGCC
AGTACACCGGAAGGAAGCTGGCTAACAGTTATATCCGGAACCGCCCAATGGGGCAGTTTTCTGTAGAT
AGTTTATACAATCCTGATTACATGCATTATGTGAGCTTCCGGACATTTGTTGTAAGATCTTCCCTAAA
GAAATAATGATTTTTTATACATAGTTGTTGTGTACAGAAATGACAGCCCTCTAGGAGAACAACGGGCA
AATAGATTTATAGAATTATATAATATAAAAAGAGATATCATGCAGGAATTAAATTATGAGTTACCAGAG
TTAAAGGCAGTAAATCTGAAATGATTATCGCACGTGAAATGGGAGAAATCTTTAGCTACATGCCTGGG
GAAATAGACAGTTATATGAAATACATAAATAATAAACTTTCTAAAATTGAGTAG (SEQ ID NO:17)

FIG. 5GEnterohemorrhagic *E. coli* NleE Protein Sequence

minpvtntqgvspintkyaehvvkniypeikhdyfnespnidydkkyisgitrgvaelkgeefvnekarr
fsymktmysvcpeafepisrneastpegswltvisgkrpmgqfsvdslynpdhalcelpdicckifpk
enndflyivvvyrndsplgeqranrfielynikrdimgelnyelpelkavksemiaremgeifsympg
eidsymkyinnklskie (SEQ ID NO:39)

FIG. 5H

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Citrobacter rodentium NleF DNA Sequences

atgttaccaacaagtgggttcttcAGCAAATCTTTACTCATGGATGTATATCTCAGGAAAAGAGAATCCT
 TCGACTCCGGAATCAGTAAGTGAACCTTAATCATAATCATTTTTCTTTCTCCTGAATTACAGGAGAACTG
 GATGTTATGTTCCGCATATATTCATGTGCCAGAAACAATGATGAGCGTGAGAATATTTACCCGGAGCTA
 AGGGATTTTGTAAGTAGCCTAATGGATAAGAGAAACAATGTGTTTGAGGTGATAAATGAAGATACTGAT
 GAGGTGACCGGAGCTCTGAGAGCGGGAATGACGATAGAGGACAGGGATAGTTATATCAGGGATCTTTTT
 TTTCTGCATTTCATTGAAAGTAAAAATTGAGGAAAGCAGACAAGATAAAGAGGATTGGAAATGTAAAGTT
 TATGATCTGCTATGTCCGCATCATTCTTCAGAGCTATATGGGGATCTACGGGCAATCAAATGCCTCGTT
 GAAGGATGCAGTGATGATTTTAGTCCTTTTGATACTATTAAGGTGCCGGATCTTACTTAcaacaaagga
 tctttacaatgtgatga (SEQ ID NO:18)

FIG. 6A

AGCAAATCTTTACTCATGGATGTATATCTCAGGAAAAGAGAATCCTTCGACTCCGGAATCAGTAAGTGA
 ACTTAATCATAATCATTTTTCTTTCTCCTGAATTACAGGAGAACTGGATGTTATGTTCCGCATATATTC
 ATGTGCCAGAAACAATGATGAGCGTGAGAATATTTACCCGGAGCTAAGGGATTTTGTAAGTAGCCTAAT
 GGATAAGAGAAACAATGTGTTTGAGGTGATAAATGAAGATACTGATGAGGTGACCGGAGCTCTGAGAGC
 GGGAATGACGATAGAGGACAGGGATAGTTATATCAGGGATCTTTTTTTCTGCATTTCATTGAAAGTAAA
 AATTGAGGAAAGCAGACAAGATAAAGAGGATTGGAAATGTAAAGTTTATGATCTGCTATGTCCGCATCA
 TTCTTCAGAGCTATATGGGGATCTACGGGCAATCAAATGCCTCGTTGAAGGATGCAGTGATGATTTTAG
 TCCTTTTGATACTATTAAGGTGCCGGATCTTACTTA (SEQ ID NO:19)

FIG. 6BCitrobacter rodentium NleF Protein Sequences

MLPTSGSSANLYSWMYISGKENPSTPESVSELNHNHFLSPELQEKLDVMFAIYSCARNNDERENIYPEL
 RDFVSSLMDKRNNVFEVINEDTDEVTGALRAGMTIEDRDSYIRDLFFLHSLKVKIEESRQDKEDWKCKV
 YDLLCPHHSSELYGDLRAIKCLVEGCSDDFSPFDTIKVPDLTYNKGSLQC (SEQ ID NO:40)

FIG. 6C

ANLYSWMYISGKENPSTPESVSELNHNHFLSPELQEKLDVMFAIYSCARNNDERENIYPELRDFVSSLM
 DKRNNVFEVINEDTDEVTGALRAGMTIEDRDSYIRDLFFLHSLKVKIEESRQDKEDWKCKVYDLLCPHH
 SSELYGDLRAIKCLVEGCSDDFSPFDTIKVPDL (SEQ ID NO:41)

FIG. 6D

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Enteropathogenic *E. coli* NleF DNA Sequence

atgttaccacaagtgggttcttcagcaaatctttattcatggatgtatgtatcaggaagaggttaaccct
tcgactccggaatcagtaagtgaagcttaatacataatcactttctttctcctgaattacaagataaaactt
gatgttatggctctctatatattcatgtgccagaaataataatgagcttgaggaaatttttcaagagcta
agtgccttttgtaagtgggctgatggataagagaaatagtgtatttgaggtgagaaatgaaaatactgat
gaggttgctcggagcgcctgagggcggaatgacgatagaggatagggatagttatatcagggatcttttt
tttctgcattcattgaaagtaaaaattgaggaaagtagacaaggcaaagaagattcgaaatgtaaagtt
tataatctgctatgtccgcatactcttcagagctatatgggtgatctacgagcaatgaaatgcctcgtg
gaaggatgcagtgatgattttaatccttttgatattattagggtaggtagatcttacttacaacaaagga
tctttacaatgtggatga (SEQ ID NO:20)

FIG. 6EEnteropathogenic *E. coli* NleF Protein Sequence

MLPTSGSSANLYSWMYVSGRGNPSTPESVSELNHNHFLSPELQDKLDVMVSIYSCARNNNELEEIFQEL
SAFVSGLMDKRNSVFEVRNENTDEVVGALRAGMTIEDRDSYIRDLFFLHSLKVKIEESRQKEDSKCKV
YNLLCPHHSSELYGDLRAMKCLVEGCSDDFNPFDIIRVPDLTYNKGS LQCG (SEQ ID NO:42)

FIG. 6FEnterohemorrhagic *E. coli* NleF DNA Sequence

ATGTTACCAACAAGTGGTTCTTCAGCAAATCTTTATTTCATGGATGTATGTATCAGGAAGAGGTAACCCCT
TCGACTCCGGAATCAGTAAGTGAGCTTAATCATAATCACTTTCTTTCTCCTGAATTACAAGATAAACTT
GATGTTATGGTCTCTATATATTTCATGTGCCAGAAATAATAATGAGCTTGAGGAAATTTTCAAGAGCTA
AGTGCTTTTGTAAGTGGGCTGATGGATAAGAGAAATAGTGTATTGAGGTGAGAAATGAAAATACTGAT
GAGGTTGTCGGAGCGCTGAGGGCGGGAATGACGATAGAGGACAGGGATAGTTATATCAGGGATCTTTTT
TTTCTGCATTCAATTGAAAGTAAAAATTGAGGAAAAGTAGACAAGGCAAAGAAGATTCGAAATGTAAAGTT
TATAATCTGCTATGTCCGCATCACTCTTCAGAGCTATATGGTGATCTACGAGCAATGAAATGCCTCGTG
GAAGGATGCAGTGATGATTTTAATCCTTTTGATATTATTAGGGTACCAGATCTTACTTACAACAAAGGA
TCTTTACAATGTGGATGA (SEQ ID NO:21)

FIG. 6GEnterohemorrhagic *E. coli* NleF Protein Sequence

mlptsgssanlyswmyvsgrgnpstpesvselnhnhflspelqdkldvmvsiyscarnnneleeifqel
safvsglmdkrnsvfevrnntdevvgalragmtiedrdsyirdlfflhlslkvkieesrqgkedskckv
ynllcphhsselygdlramkclvegcsddfnpfdiirvpdltynkgs lqcg (SEQ ID NO:43)

FIG. 6H

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*

SGH MCPDNTHAKKQYLTPGNDIHYPGQTNHDACFIPVSVRQYA
 CaiF MCEG-----YV
 GrlA M-----ESKNSDYVIPDSVKNYN

****+++* +++*+ ++* ** ++ ++

SGH GEPLYIIIVAHWCLLQONWVQORNOIAEAFHITARRASYLIA
 CaiF EKPLYLLIAEWMMAENRWVIAREISIHFDIEHSAVNTLT
 GrlA GEPLYILVSLWCKLQEKWISRNDIAEAFGINLRRASFIIT

Helix-turn-helix motif

** + + + + + + **

SGN YLSKTSRVVSICRHQTLPN-KARRYEIY-VIRVLDSPTP
 CaiF YILSEVTEISCEVKMIP-NKLEGRGCQCQRLVKVVDIDEQ
 GrlA YISRRKEKISFRVRYVSYGNLHYKRLEIF-IYNVNLEAAP

+ + *+ *+ +

SGN STRREKAGPP-----LVSKRRVGNNGDRSM--ANELWNRLC
 CaiF IYARLRNNSREKLVGVRKTPRIPAVPLTELNREQKWQMM-
 GrlA TESHVSTGPK-----RKTLRVGNGIVG---QSSIWNEM-

+***+ +

SGN SNRNAGKILKKKEDEDDGT (170 aa)
 CaiF ----LSKSMRR (131 aa)
 GrlA -----IMRRKKE----S (135 aa)

FIG. 7

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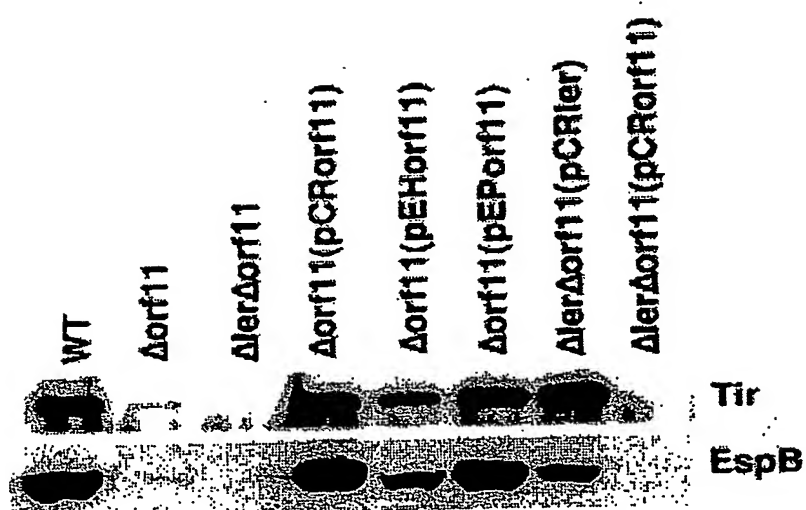


FIG. 8

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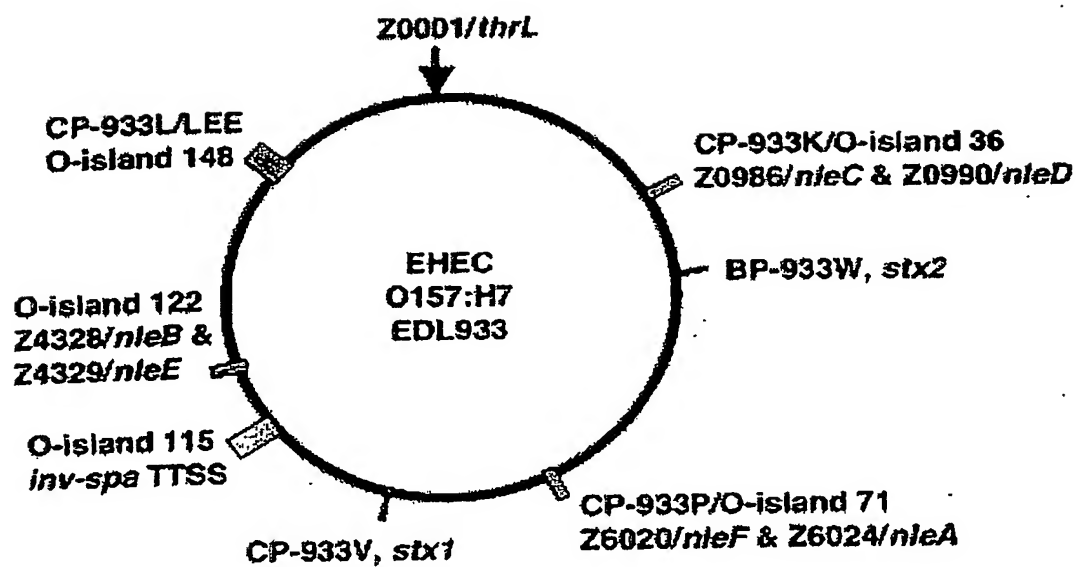
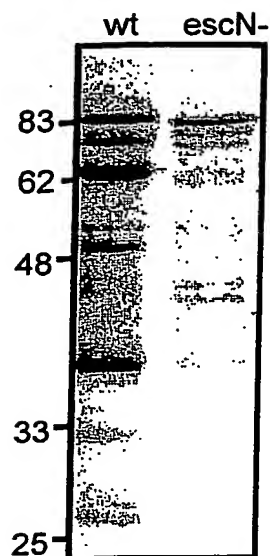


FIG. 9

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A.



B.

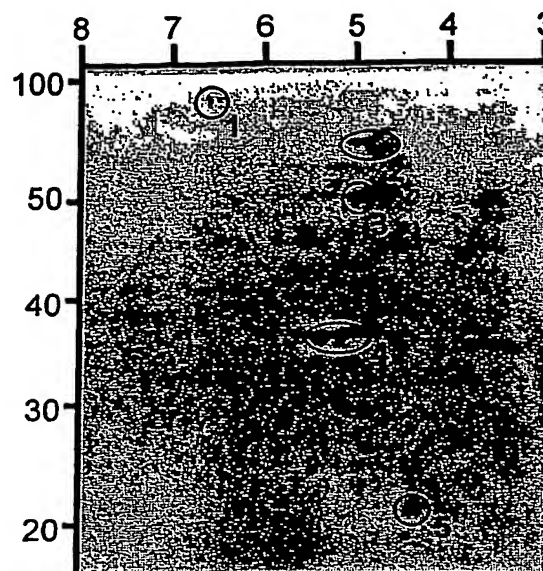


FIG. 10

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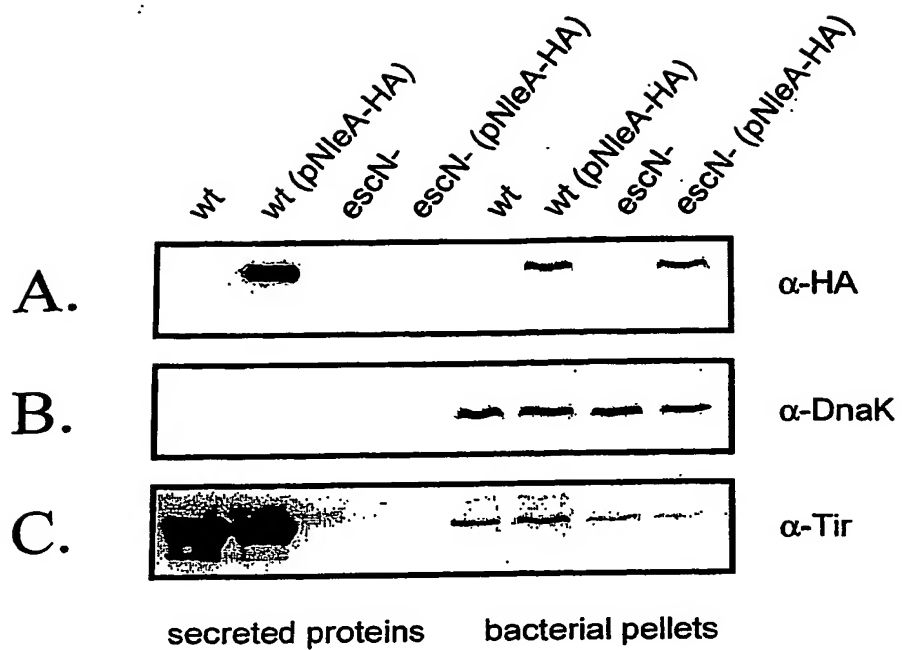


FIG. 12

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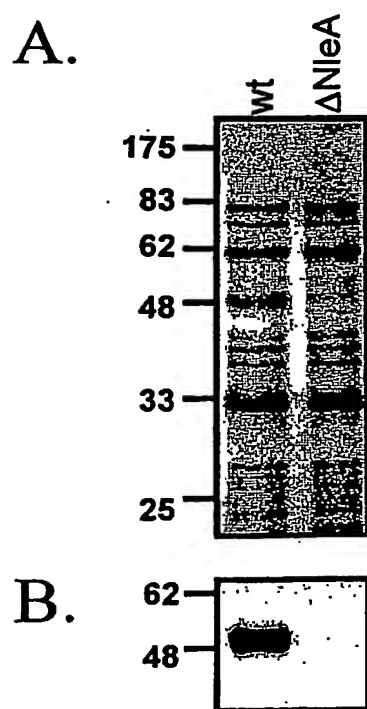
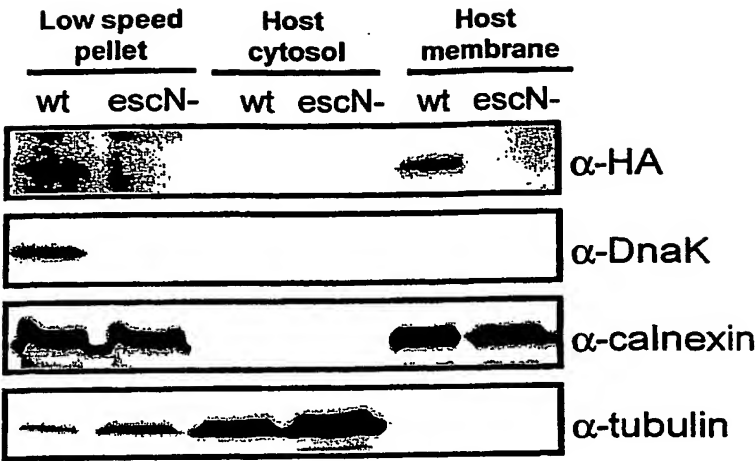


FIG. 13

A.



B.

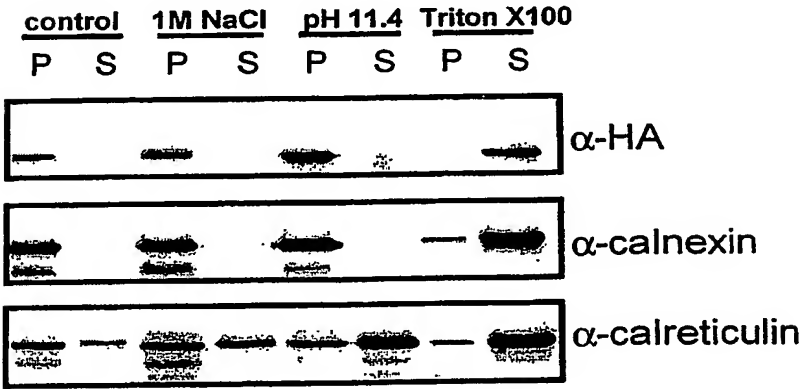


FIG. 14

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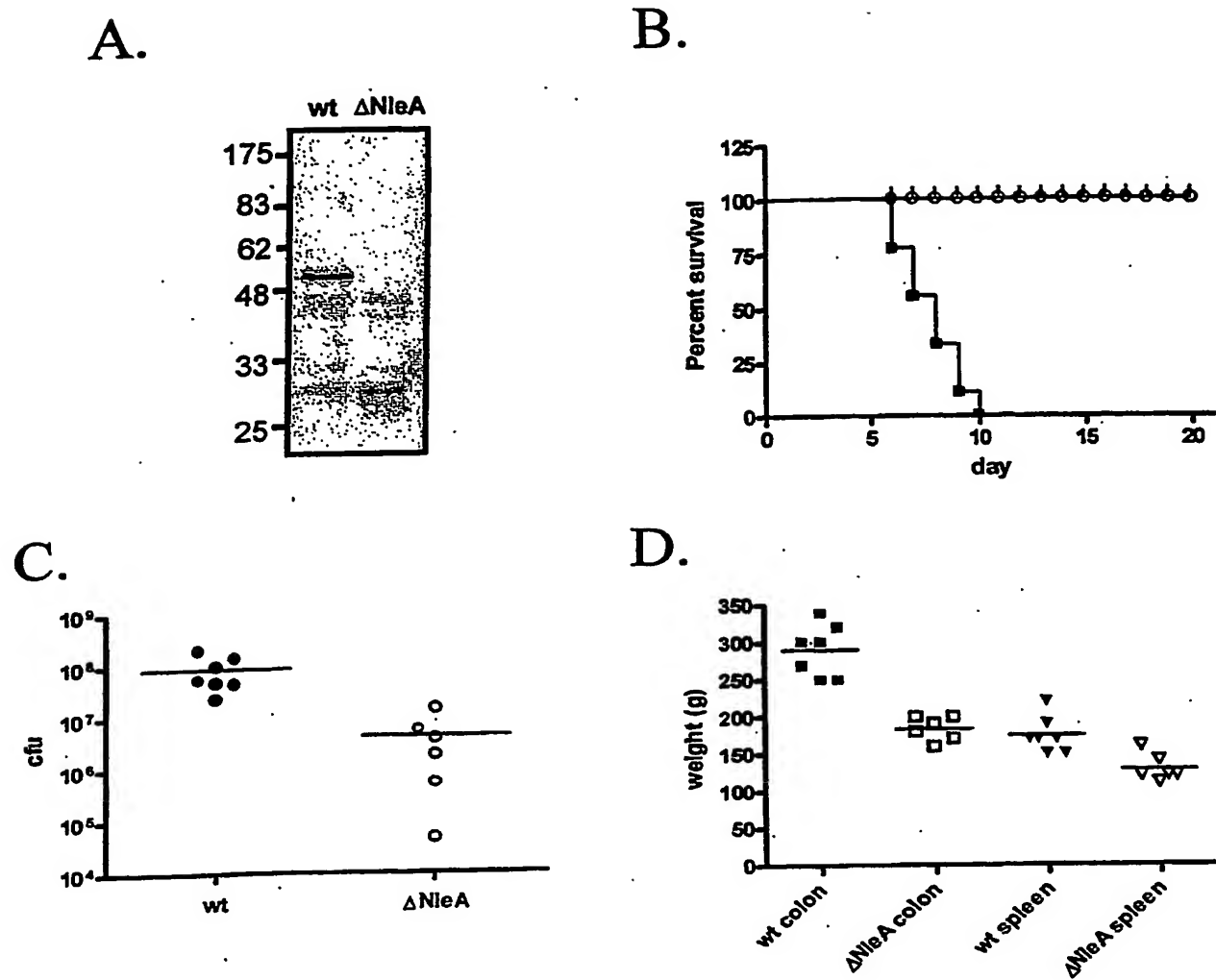


FIG. 15

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Enterohemorrhagic *E. coli* NleG homolog Nucleotide Sequence

ATGAATGTCCTTCGAGCTCAAGTAGCATCTAGCGGTCGAGGGGAGTTTACATTAGGTAAT
GAGACTGTCAGCATTGTATTTAATGAAACCGATGGGCGTTTTCTATCCAGCGGCAGTAGT
GGGGGATTGCTTACTGAGTTATTCCTTTATGGGTTTAATAACGGCCCTGAAGCTCTTCGC
GATAGGATGCTCAGTATGCTTTCGGACTCAGGTGAAGCACAATCGCAAGAGAGTATTCAG
GACAAAATATCTCAATGTAAGTTTCCTGTTAGTTCAGGAAATTTCCAGTGCCCGCCAGAG
TCTATTCAGTGTCCAATTACACTAGAGAGACCCGAAGAAGGAGTGTTCGCAAAAATTCA
GATAGTTCGGCAGTATGCTGCTTATTTGATTTTGATGCATTTTCTCGTTTAGCTAGTGAA
GGCTCATATCATCCACTGACCCGAGAACCAATAACGGCATCAATGATTATAAGTCCTGAT
AAATGTGTTTATGATCCTATCAAGGGAACTTCATTATAAAAGATAGTTAA
(SEQ ID NO: 61)

FIG. 16AEnterohemorrhagic *E. coli* NleG homolog Protein Sequence

MNVLRAQVASSGRGEFTLGNETVSIVFNETDGRFLSSGSSGGLLTELFLYGFNNGPEALRDRMLSMLSD
SGEAQSQESIQDKISQCKFPVSSGNFQCPPESIQCPITLERPEEGVFVKNSDSSAVCCLFDFDAFSRLA
SEGSYHPLTREPITASMIISPDKCVYDPIKGNFIKDS (SEQ ID NO: 73)

FIG. 16B

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Enterohemorrhagic *E. coli* NleH1 Nucleotide Sequence

ATGTTATCGCCCTCTTCTATAAATTTGGGATGTTTCATGGAATTCTTTAACCAGAAACCTG
ACTTCGCCTGATAATCGTGTGTTTTATCCTCTGTAAGGGATGCTGCTGTTCACTCTGATAGC
GGGACGCAAGTAACGGTTGGCAACAGAACATATCGTGTGTTGGTCACTGATAATAAGTTT
TGCGTTACAAGAGAAAGTCATAGTGGTTGTTTTACTAATCTGTTGCACAGGTTGGGATGG
CCTAAGGGAGAGATTAGCAGAAAAATTGAGGCTATGCTGAATACATCGCCAGTGAGCACG
ACTATAGAAAAGAGGCTCTGTTTCATTCTGAACAGACCTGATTTACCTCCAGTGGATTATGCG
CAGCCGGAGTTACCTCCAGCGGATTATACTCAATCAGAGTTGCCGAGGGTTAGCAACAAT
AAATCACCCGTGCCAGGTAATGTTATTGGTAAAGGTGGTAATGCTGTCGTGTATGAAGAT
ATGGAAGATACAACAAAAGTGTGAAGATGTTTACTATATCTCAAAGCCATGAAGAGGTG
ACAAGCGAAGTTCGTTGTTTCAATCAGTATTATGGTTCCGGGAGTGCAGAGAAAAATATAT
AATGATAATGGAAATGTTATTGGTATTAGAATGAATAAAATAAATGGGGAATCTCTTTTG
GATATTCCATCATTACCAGCACAAAGCTGAACAGGCTATTTACGATATGTTTGACAGACTG
GAGAAAAAAGGAATTCTTTTTGTTGATACAACAGAAACAAATGTTTTATATGATCGTATG
AGAAATGAATTTAATCCAATAGATATATCATCTTATAATGTTTCTGATATTTTCATGGAGT
GAACATCAAGTCATGCAATCTTATCACGGAGGAAAGCTGGATCTTATTAGTGTAGTATTA
AGTAAGATATAA

(SEQ ID NO: 62)

FIG. 17AEnterohemorrhagic *E. coli* NleH1 Protein Sequence

MLSPSSINLGCSWNSLTRNLTSPDNRVLSSVRDAAVHSDSGTQVTVGNRTYRVVVTDNKF
CVTRESHSGCFTNLLHRLGWPKGEISRKIEAMLNTSPVSTTIERGSVHSNRPDLPPVDYA
QPELPPADYTQSELPRVSNNKSPVPGNVIGKGNVYEDMEDTTKVLKMFITISQSHEEV
TSEVRCFNQYYGSGSAEKIYNDNGNVIGIRMNKINGESLLDIPSLPAQAEQAIYDMFDRL
EKKGILFVDTTETNVLYDRMRNEFPIDISSYNVSDISWSEHQVMQSYHGGKLDLISVVL
SKI (SEQ ID NO: 74)

FIG. 17B

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Enterohemorrhagic *E. coli* NleH2 Nucleotide Sequence

ATGTTATCGCCATATTCTGTAAATTTGGGATGTTTCATGGAATTCTTTAACCAGAAACCTG
ACTTCGCCTGATAATCGTGTTTTATCCTCTGTAAGGGATGCTGCCGTTTCATTCTGATAAT
GGGGCGCAAGTAAAGGTTGGCAACAGAACATATCGTGTTGTTGCCACCGATAATAAGTTT
TGCGTTACAAGAGAAAAGTCATAGTGGTTGTTTTACTAATCTGTTGCACAGGCTGGGATGG
CCTAAGGGGGAGATTAGCAGGAAAATTGAGGTCATGCTGAATGCATCACCAGTGAGCGCT
GCTATGGAAAGAGGCATTGTTTCATTGCAACAGACCTGATTTACCTCCTGTTGATTATGCA
CCGCCAGAGTTACCGAGTGTGGACTATAACAGGTTGTCAGTACCTGGTAATGTTATTGGC
AAAGGGGGGAACGCTGTAGTATATGAAGATGCTGAGGATGCAACAAAAGTCCTGAAGATG
TTTACTACATCTCAAAGCAATGAAGAGGTGACAAGCGAAGTTCGTTGCTTCAACCAATAT
TATGGTGCCGGGAGTGCAGAAAAAATATATGGCAATAATGGTGATATTATTGGTATTAGA
ATGGATAAAATAAATGGAGAATCGCTTTTAAATATTTTCGTCCTTGCCAGCACAGGCTGAG
CATGCTATTTACGATATGTTTGATAGACTGGAGCAAAAAGGAATTCTTTTTGTCGATACA
ACAGAGACAAATGTCCTTATATGACCGCGCGAAGAATGAGTTTAATCCAATAGATATATCA
TCTTATAATGTTTCCGACCGTTCATGGAGTGAAAAGTCAAATAATGCAATCTTATCATGGC
GGAAAGCAAGATCTTATTAGTGTGGTATTAAGTAAAATTTAG (SEQ ID NO: 63)

FIG. 18AEnterohemorrhagic *E. coli* NleH2 Protein Sequence

MLSPYSVNLGCSWNSLTRNLTPDNRLSSVRDAAVHSDNGAQVKVGNRTYRVVATDNKF
CVTRESHSGCFTNLLHRLGWPKGEISRKIEVMLNASPVSAAMERGIVHSNRPDLPPVDYA
PPELPSVDYNRLSVPGNVIGKGNNAVYEDAEDATKVLKMF TTSQSNEEVTSEVRCFNQY
YGAGSAEKIYGNNGDIIGIRMDKINGESLLNISSLPAQAEHAIYDMFDRLEQKGILFVDT
TETNVLYDRAKNEFNPIDISSYNVSDRSWSESQIMQSYHGGKQDLISVVLSKI (SEQ ID NO: 75)

FIG. 18B

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Enterohemorrhagic *E. coli* Z2076 Nucleotide Sequence

ATGGTAATGCCTGGATTAGTATCATATATATCATCGACTTCATTGCGGAATGAGATGGCG
GAGATGCGTCAGCAGGTAATGGAAGGGCAGATTGGTGGATTTCTCCTGGGAGGGGAGAGA
GTTAGAGTTTCTTATTTATTCAATTGCATTAA (SEQ ID NO: 64)

FIG. 19AEnterohemorrhagic *E. coli* Z2076 Protein Sequence

MVMPGLVSYISSTSFANEMAEMRQQVMEGQIGGFLLGGERVRVSYLFQLH
(SEQ ID NO: 76)

FIG. 19B

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Enterohemorrhagic *E. coli* Z2149 Nucleotide Sequence

ATGCCATTAAACCTCAGATATTAGATCACATTCATTTAATCTTGGGGTGGAGGTTGTTTCGT
GCCCCGAATTGTAGCCAATGGGCGCGGAGATATTACAGTCGGTGGTGAAACTGTCAGTATT
GTGTATGATTCTACTAATGGGCGCTTTTCATCCAGTGGCGGTAATGGCGGATTGCTTTCT
GAGTTATTGCTTTTGGGATTTAATAGTGGTCCTCGAGCCCTTGGTGAGAGAATGCTAAGT
ATGCTTTTCGGACTCAGGTGAAGCACAATCGCAAGAGAGTATTCAGAACAAAATATCTCAA
TGTAAGTTTTCTGTTTGTCCAGAGAGACTTCAGTGCCCGCTTGAGGCTATTCAGTGTCCA
ATTACACTGGAGCAGCCTGAAAAAGGTATTTTTGTGAAGAATTCAGATGGTTCAGATGTA
TGTACTTTATTTGATGCCGCTGCATTTTCTCGTTTGGTTGGTGAAGGCTTACCCACCCA
CTGACCCGGGAACCAATAACGGCATCAATAATTGTAAACATGAAGAATGCATTTATGAC
GATACCAGAGGAACTTCATTATAAAGGGTAATTGA (SEQ ID NO: 65)

FIG. 20AEnterohemorrhagic *E. coli* Z2149 Protein Sequence

MPLTSDIRSHSFNLGVEVVRARIVANGRGDITVGGETVSIVYDSTNGRFSSSGGNGLLS
ELLLLGFN SGPRALGERMLSMLSDSGEASQESIQNKISQCKFSVCPERLQCPLEAIQCP
ITLEQPEKGIFVKNSDGS DVCTLFDAAAF SRLVGEGLPHPLTRE PITASIIVKHEECIYD
DTRGNFIIKGN (SEQ ID NO: 77)

FIG. 20B

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Enterohemorrhagic *E. coli* Z2150 Nucleotide Sequence

atgcctgtta ccaccttaag tatcccaagt atatctcaat tatctcctgc aagagtacag
tctttgcagg atgcagccag acttgaaaagt ggaataagaa tatccattgg tagtggccaa
tattctgttc actatgtcca actactggat ggattttcag ttgaaccggt gagaggaggc
ttactggata ggctattggg gcgtgagcat cgaatggata gaagggctgt ggctctggaa
aggcaattaa atggaggtgt cgatttttta agtagtgta ataactattt tcagagtgtc
atggcagaac acagagaaaa taaaacaggt aataaaatat taatggaaaa aataaattct
tgtgtatttg gaacggattc taatcacttt tcttgcccgg agtcattttt gacatgcccg
ataacgctgg acacacctna gactggagtg ttcagagaa actcacgagg tgctgagata
tgctctctat atgataagga tgcgttagtg caacttgttg aaactggtgg aactcatcct
ctgagtcgag aacctataac agaatcaatg attatgagaa aagacgaatg tcactttgat
gcaaaaagag aagctttttg ttgtaagtga
(SEQ ID NO: 66)

FIG. 21AEnterohemorrhagic *E. coli* Z2150 Protein Sequence

MPVTTLSIPSISQLSPARVQSLQDAARLESGIRISIGSGQYSVHYVQLLDGFSVEPVRGGLLDRLGRE
HRMDRRAVALERQLNGGVDFLSSVNNYFQSVMAEHRENKTGNKILMEKINSCVFGTDSNHFSCPESFLT
CPITLDTPTXGTFMRNSRGAEICSLYDKDALVQLVETGGTHPLSREPITESMIMRKDECHFDAKREAF
CK (SEQ ID NO:78)

FIG. 21B

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Enterohemorrhagic *E. coli* Z2151 Nucleotide Sequence

ATGCCTGTAGATTTAACGCCTTATATTTTACCTGGGGTTAGTTTTTTGTCTGACATTCCCT
CAAGAAACCTTGTCTGAGATACGTAATCAGACTATTCGTGGAGAAGCTCAAGTAAGACTG
GGTGAGTTGATGGTGTCAATACGACCTATGCAGGTAAATGGATATTTTATGGGAAGTCTT
AACCAGGATGGTTTATCGAATGATAACATCCAGATTGGCCTTCAATATATAGAACATATT
GAACGTACACTTAATCATGGTAGTTTGACAAGCCGTGAAGTTACAGTACTGCGTGAAATT
GAGATGCTCGAAAAATATGGAATTGCTTTCTAACTACCAGTTAGAGGAGTTGTTAGATAAA
ATTGAAGTATGTGCATTTAATGTGGAGCATGCACAATTGCAAGTGCCAGAGAGCTTACGA
ACATGCCCTGTTACATTATGTGAACCAGAAGATGGGGTATTTATGAGGAATTCAATGAAT
TCAAATGTTTGTATGTTGTATGATAAAATGTCATTAATATATCTTGTTAAAACAAGGGCG
GCTCATCCTTTGAGCAGGGAATCAATCGCAGTTTCAATGATTGTAGGAAGAGATAATTGT
GCTTTTGACTCTGACAGAGGTAACCTTCGTTTTAAAAAATTAA (SEQ ID NO: 67)

FIG. 22AEnterohemorrhagic *E. coli* Z2151 Protein Sequence

MPVDLTPYILPGVSFLSDIPQETLSEIRNQTIERGEAQVRLGELMVSIRPMQVNGYFMGSL
NQDGLSNDNIQIGLQYIEHIERTLNHGSLTSREVTVLREIEMLENMELLSNYQLEELLDK
IEVCAFNV EHAQLQVPESLRTCPVTLCPEPDGVFMRNSMNSNVCMLYDKMSLIYLVKTRA
AHPLSRESIAVSMIVGRDNCADFSDRGNFVLKN (SEQ ID NO: 79)

FIG. 22B

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Enterohemorrhagic *E. coli* Z2337 Nucleotide Sequence

ATGCCTGTAGATTTAACGCCTTATATTTTACCTGGGGTTAGTTTTTTGTCTGACATTCCCT
CAAGAAACCTTGTCTGAGATACGTAATCAGACTATTCGTGGAGAAGCTCAAATAAGACTG
GGTGAGTTGATGGTGTCAATACGACCTATGCAGGTAAATGGATATTTTATGGGAAGTCTT
AACCAGGATGGTTTATCGAATGATAATATCCAGATTGGCCTTCAATATATAGAACATATT
GAACGTACACTTAATCATGGTAGTTTGACAAGCCGTGAAGTTACAGTACTGCGTGAAATT
GAGATGCTCGAAAATATGGATTTGCTTCTAACTACCAGTTAGAGGAGTTGTTAGATAAA
ATTGAAGTATGTGCATTTAATGTGGAGCATGCACAATTGCAAGTGCCAGAGAGCTTACGA
ACATGCCCTGTTACATTATGTGAACCAGAAGATGGGGTATTTATGAGGAATTCAATGAAT
TCAAATGTTTGTATGTTGTATGATAAAATGGCATTAAATACATCTTGTTAAACAAGGGCG
GCTCATCCTTTGAGCAGGGAATCAATCGCAGTTTCAATGATTGTAGGAAGAGATAATTGT
GCTTTTGACCCTGACAGAGGTAACCTTCGTTTTTAAAAAATTAA (SEQ ID NO: 68)

FIG. 23AEnterohemorrhagic *E. coli* Z2337 Protein Sequence

MPVDLTYPYILPGVSFLSDIPQETLSEIRNQTIERGEAQIRLGELMVSIRPMQVNGYFMGSL
NQDGLSNDNIQIGLQYIEHIERTLNHGSLTSREVTVLREIEMLENMDLLSNYQLEELLDK
IEVCAFNVEHAQLQVPESLRTCPTLCEPEDGVFMRNSMNSNVCMLYDKMALIHLVKTRA
AHPLSRESIAVSMIVGRDNCAFDPRGNFVLKN (SEQ ID NO: 80)

FIG. 23B

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Enterohemorrhagic *E. coli* Z2338 Nucleotide Sequence

ATGCCTGTTACCACCTTAAGTATCCCAAGTATATCTCAATTATCTCCTGCAGGAGTACAG
TCTTTGCAGGATGCTGCCAGACTTGAAAGTGGAATAAGAATATCCATTGGTAGTGGCCAA
TATTCTGTTCACTATGTCCAGCTACTGGATGGATTTTCAGTTGAACCGGTGAGAGGAGGC
TTACTGGATAGGCTATTGGGGCGTGAGCATCGAATGGAGAGAAGGGCTGTGGCTCTGGAA
AGGCAATTAAATGGAGGTGTCGATTTTTTAAGTAGTGTTAATAACTATTTTCAGAGTGTC
ATGGCAGAACACAGAGAAAATAAAACAAGTAATAAAATATTAATGGAAAAATAAATTCT
TGTTTATTTAGACCTGATTCTAATCACTTTTCTTGCCCGGAGTCATTTTGTGACATGCCCG
ATAACGCTGGACACACCTGAGACTGGGGTGTTTCATGAGAACTCACGAGGTGCTGAGATA
TGCTCTCTATATGATAAGGACGCGTTAGTGCAACTTGTTGAACTGGTGGAGCTCATCCT
CTGAGTCGAGAACCTATAACAGAATCAATGATTATGAGAAAAGATGAATGTCACTTTGAT
ACAAAAGAGAAGCTTTTTGTTGTAAGTGA (SEQ ID NO: 69)

FIG. 24AEnterohemorrhagic *E. coli* Z2338 Protein Sequence

MPVTTLSIPSISQLSPAGVQSLQDAARLESGIRISIGSGQYSVHYVQLLDGFSVEPVRGG
LLDRLLGREHRMERRAVALERQLNGGVDFLSSVNNYFQSVMAEHRENKTSNKILMEKINS
CLFRPDSNHFSCPEFLTCPITLDTPETGVFMRNSRGAEICSLYDKDALVQLVETGGAHP
LSREPITESMIMRKDECHFDTKREAFCK (SEQ ID NO: 81)

FIG. 24B

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Enterohemorrhagic E. coli Z2339 Nucleotide Sequence

ATGCCATTAACCTCAGATATTAGATCACATTCATTTAATCTTGGGGTGGAGGTTGTTTCGT
GCCCCGAATTGTAGCCAATGGGCGCGGAGATATTACAGTCGGTGGTGAAACTGTCAGTATT
GTGTATGATTCTACTAATGGGCGCTTTTCATCCAGTGGCGGTAATGGCGGATTGCTTTCT
GAGTTATTGCTTTTGGGATTTAATAGTGGTCCTCGAGCCCTTGGTGAGAGAATGCTAAGT
ATGCTTTCGGACTCAGGTGAAGCACAAATCGCAAGAGAGTATTCAGAACAAAATATCTCAA
TGTAAGTTTTCTGTTTGTCCAGAGAGACTTCAGTGCCCGCTTGAGGCTATTCARTGTCCA
ATTACACTGGAGCAGCCTGAAAAAGGTATTTTTGTGAAGAATTCAGATGGTTCAGATGTA
TGTACTTTATTTGATGCCGCTGCATTTTCTCGTTTGGTTGGTGAAGGCTTACCCACCCA
CTGACCCGGGAACCAATAACGGCATCAATAATTGTAAACATGAAGAATGCATTTATGAC
GATACCAGAGGAACTTCGTTATAAAGGGTAATTGA (SEQ ID NO: 70)

FIG. 25AEnterohemorrhagic E. coli Z2339 Protein Sequence

MPLTSDIRSHSFNLGVEVVRARIVANGRGDITVGGETVSIVYDSTNGRFSSSSGGNGGLLS
ELLLLGFNSGPRALGERMLSMLSDSGEAQSQESIQNKISQCKFSVCPERLQCPLEAIQCP
ITLEQPEKGIFVKNSDGSVDCTLFDAAAFRLVGEGLPHPLTREPIIASIIVKHEECIYD
DTRGNFVIKGN (SEQ ID NO: 82)

FIG. 25B

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Enterohemorrhagic *E. coli* Z2560 Nucleotide Sequence

atggacgctt ttattgtaga tcctgttcaa ggggaactat attcggggtt aagccataca
gaactagccg atatcattag attggctgat tctgttgaaa atcaattgaa tggaggcaat
tcatttcctg atgtattcag tacatatatg gggcagggtta tttctgaatt tatgcatagt
aatgataaca gaattgaatt gttacagcgg cgattacatt catgttcatt tttagttaat
attgaagaaa tgtcttacat agatgaagca ttacagtgcc cgattacgct ggcaattcct
caacgagggtg tttttttaag aaatgctgaa ggttccagag tatgtagttt atatgatgaa
atggctcttt ctgtataat taatgatggg atgcatcacc cactaagcag agagccaata
acattatcaa tgcttggtgc cagagagcag tgtgagtttg attgcagtat cggtcacttt
acggtgagga gtgattgtta ttcagtgtag (SEQ ID NO: 71)

FIG. 26AEnterohemorrhagic *E. coli* Z2560 Protein Sequence

MDA[†]IVDPVQGLYSGLSHTELADIIRLADSVENQLNGGNSFLDV[†]FSTYMGQVISEFMHSNDNRIELLQ
RR[†]LHSCSFLVNIEEMSYIDEALQCPITLAI[†]PQ[†]RGVFLRNAEGSRVCSLYDEMALSRIINDGMHHPLSRE
PITLSMLVAREQCEFD[†]CSIGHFTVRS[†]DCYSV (SEQ ID NO: 83)

FIG. 26B

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Enterohemorrhagic *E. coli* Z2976 Nucleotide Sequence

ATGGCAGACCGCAAACAGCACCGCGCTATCGCGGAGCGTCGTACATCCAGACTGAAATC
AACCGCAGACTTTCCCGCGCATCACGCGTCGCGCAAATCATGCACATCAATATGCTGCAT
GAGCGCAGCCACGCACTATCAAACATTTATTCCGCCTCTGTTTTCAGCTATCTGGCGGAT
GATCTGCACGAGTTTCAACAGCTCATCCAGCAGCAAAACAAACTCCATTAA (SEQ ID NO:72)

FIG. 27AEnterohemorrhagic *E. coli* Z2976 Protein Sequence

MADRKQHRAIAERRHIQTEINRRLSRASRVAQIMHINMLHERSHALSNIYSASVFSYLAD
DLHEFQQLIQQQNKLH (SEQ ID NO:84)

FIG. 27B